



Habitat Information Tracking System



Dec 9, 2009

Project Overview

Project: (50380) Bear Swamp NLT

Type: Habitat Improvement
Orgcode: (51120) DELAWARE BAY ESTUARY PROJECT
Entered By: Gregory Breese, (302) 653-9152
Point of Contact: Gregory Breese
Creation Date: Aug 15, 2008
Status: Completed
Completion Date: May 2008
State: Delaware
FWS Region: 5

Project Narrative:

The Trust's Bear Swamp West property includes approximately 800 acres adjacent to the Trust's Glades Wildlife Refuge. Bear Swamp contains a unique plant community that includes one of the last and largest stands of old growth trees in New Jersey including species such as black gum (*Nyssa sylvatica*) and sweet gum (*Liquidambar styraciflua*) that are estimated to be at least 450 years old. Prior to acquisition by the Trust this forest had been described by federal and state authorities as one of the most important unprotected habitats in the country. The forest edge is bordered by a lake that formed when groundwater filled in the depression created by sand mining operations that previously occurred in the area.

Surface mining for sand, gravel and rock is common in New Jersey. The New Jersey Geological Survey lists 1,009 inventoried surface mining operations in the State with 186 being registered as operational and 823 as inactive and abandoned. The lakes that often result from surface mining can be enhanced to provide fish and wildlife habitat. However, left alone and unmanaged these lakes may remain relatively sterile environments unsupportive of wildlife due the homogenous benthic substrates and limited shallow-water habitats along the shorelines.

The Bear Swamp lake (currently owned by U.S. Silica) is typical, with little shallow water or wetlands along the shoreline, supporting a limited aquatic community. The lake's shoreline includes a peninsula (owned by the Trust) which covers approximately five acres. The Trust, in collaboration with a variety of partners will expand the peninsula into the surrounding water and dig channels through the peninsula to create shallow-water wetland habitat. Additional partners who may provide technical assistance in project implementation and who may use project results as a template for future restoration efforts include U.S. Silica; the Nature

Conservancy; Citizens United to Protect the Maurice River; the New Jersey Concrete and Aggregate Association, and the New Jersey Division of Fish and Wildlife.

The Trust will hire a local contractor to spread the peninsula further into the lake and dig channels and fingers through the peninsula to create approximately 10-acres of shallow water wetlands. By lowering the elevation of the peninsula and by expanding it, valuable shallow-water wetlands will be created along the lake. The resulting topography will vary in elevation to maximize habitat diversity.

The site is accessible for equipment entry via an existing dirt road and the contractor will likely use a combination of a dragline dredge and excavator. The work is expected to begin during the fall or winter of 2006/7 when ground water is relatively low. The estimated cost of the contracted work is \$13,500.

Over the majority of the area emergent wetlands will be established. Fringe wetlands already established along the lake, west of the project area, demonstrate that the local substrate and water quality can accommodate emergent wetland plants. To begin the vegetation process the Trust and project partners will plant a variety of herbaceous vegetation in the created wetland during the spring of 2007. These plantings will hasten the development of desirable fish and wildlife habitat and stabilize the disturbed sediment. The wetland will be further colonized over time by natural recruitment from the existing nearby fringe wetlands. Over time these wetlands are expected to support woody vegetation. All wetland plants will be purchased from local native plant nurseries. Species selected will be those that have specific benefits to wildlife and are adapted to wet, acidic soils. The estimated cost of the plants is \$1,500.

The project has numerous benefits. The principal benefit will be the creation of productive fish and wildlife habitat along a lake with limited habitat aquatic communities due to its history of mining. The project will create excellent warfowl and wading bird habitat. The wetlands will enhance the currently limited fishery in the lake by providing shallow spawning habitat.

A second equally important benefit will be implementation of a project that demonstrates an environmentally sound approach to restoration of several vegetation communities associated with

shorelines of mining-created lakes throughout southern New Jersey. A third benefit will be the further enhancement of the already remarkable plant diversity associated with the Bear Swamp area.

Although the lake currently does not support a fishery adequate to support foraging eagles, there are 17 active bald eagle (*Haliaeetus leucocephalus*) nests within a 10 mile radius of the lake. As the area around the lake converts to a more natural system with diverse vegetation, eagle foraging habitat is expected to develop.

Public Description:

The Trust's Bear Swamp West property includes approximately 800 acres adjacent to the Trust's Glades Wildlife Refuge. Bear Swamp contains a unique plant community that includes one of the last and largest stands of old growth trees in New Jersey including species such as black gum (*Nyssa sylvatica*) and sweet gum (*Liquidambar styraciflua*) that are estimated to be at least 450 years old. Prior to acquisition by the Trust this forest had been described by federal and state authorities as one of the most important unprotected

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Project mechanism(s):

1. Title: Bear Swamp NLT

Mechanism Type: Cooperative Agreement

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Mechanism Type: Cooperative Agreement

Agreement No.: 50181-8-J066

Primary Non-FWS Party: NGO/Land Trust

Date of Mechanism: Sep 01, 2004

Length of Mechanism: 3 years

Funds Obligated Date: Sep 2004

Funding Source Fiscal Year: 2004

Mechanism accomplishment(s):

1. **Title:** Bear Swamp NLT

Habitat Type: Wetland

Accomplishment Type: Restoration

Accomplishment: Bear Swamp NLT

Accomplishment: Bear Swamp NLT**Mechanism: Bear Swamp NLT**

Coordinates: Longitude: -75.126, Latitude: 39.294

Watershed (HUC): COHANSEY - MAURICE

Congressional District: NJ02

Frank A. LoBiondo (R)

County: Cumberland

State: New Jersey

FWS Region: 5 - Region 5

FWS Ecoregion: Delaware River/Delmarva Coastal Area

Joint Venture Area: Atlantic Coast Joint Venture

Accomplishment Status: Final

Accomplishment Type: Restoration

Habitat Type: Wetland

Habitat Class: Palustrine

Habitat Sub-Class: Emergent Wetland

Completion Date: Apr 30, 2008

Primary Trust/Resource Benefits: Migratory Birds

Secondary Trust/Resource Benefits: Threatened/Endangered/Candidate Species

Overlay Protection Holder: NGO/Land Trust

Protected in perpetuity? yes

Accomplishment area(s):

1. Title: Bear Swamp NLT

Primary Non-FWS Party: NGO/Land Trust

Area: Bear Swamp NLT

Accomplishment: Bear Swamp NLT**Area: Bear Swamp NLT**

Primary Non-FWS Party: NGO/Land Trust

Fiscal Year of Work: 2008

Treatment / Technique: 1 Land Reconstruction, Abandoned Mine, De-leveling

Est. Acres Before: 10.0

Acres Before: 10.0

Est. Acres After: 10.0

Acres After: 10.0

Comments:

A 5 acre peninsula in an abandoned sand/gravel mining pond will be spread out to create 10 acres of shallow emergent wetland habitat and then planted with native vegetation.

Area partner(s):

Partner: Natural Lands Trust, Inc.

Partner Type: NGO/Land Trust

Is this partner a landowner? yes

Partner Inkind Contribution: \$5000.00

Fiscal Year: 2008

Comments: for Natural Lands Trust, Inc.

Serve as overall coordinator for the project and owner of the peninsula

Partner: U. S. Silica

Partner Type: Private Corporation

Fiscal Year: 2008

Comments: for U. S. Silica

owner of the lake itself.

Area sub-activity(s):

FWS Sub-Activity: Coastal Program - 1124

Contribution Fiscal Year: 2008

Funding Source Fiscal Year: 2004

Est. Cash: \$15000.00

Cash: \$15000.00

Est. FWS Days: 5.0

FWS Days: 5.0

FWS Sub-Activity: Partners for Fish and Wildlife - 1121

Contribution Fiscal Year: 2008

Funding Source Fiscal Year: 2004

Est. FWS Days: 8.0

FWS Days: 8.0

Comments: for Partners for Fish and Wildlife - 1121

NJFO was the overall coordinator for the FWS on this project

Area ITIS species:

Species Name: Egretta tricolor

Common Name: Tricolored Heron

Species Name: Anas rubripes

Common Name: American Black Duck

Species Name: Pandion haliaetus

Common Name: Osprey

Species Name: Nycticorax nycticorax

Common Name: Black-crowned Night-Heron

Species Name: Aix sponsa

Common Name: Wood Duck

Total Area

Total Project Area By Habitat Type

Est. Wetland Acres Before: 10.0

Wetland Acres Before: 10.0

Est. Wetland Acres After: 10.0

Wetland Acres After: 10.0

Total Project Area

Est. Acres Before: 10.0

Acres Before: 10.0

Est. Acres After: 10.0

Acres After: 10.0

Total Contributions

Total Partner Contribution to Project By Habitat Type

Wetland Inkind: \$5000.00

Total Partner Contribution to Project

Inkind: \$5000.00

Total Service Contribution to Project By Habitat Type

Est. Wetland Cash: \$15000.00

Wetland Cash: \$15000.00

Est. Wetland FWS Days: 13.0

Wetland FWS Days: 13.0

Total Service Contribution to Project

Est. Cash: \$15000.00

Cash: \$15000.00

Est. FWS Days: 13.0

FWS Days: 13.0